



**STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL  
Lab Services - Jackson Regional Lab  
Jackson, TN 38301  
731-426-0686

TDH: Lab Services KRL  
Lab Services - Knoxville Regional Lab  
Knoxville, TN 37920  
865-549-5201

TDH: Lab Services NCL  
Lab Services - Nashville Central Lab  
Nashville, TN 37243  
615-262-6300

**Sent To:** Greg Denton  
TDEC-WPC  
6th Floor, L & C Tower Annex  
401 Church Street  
Nashville, TN 37243-1534

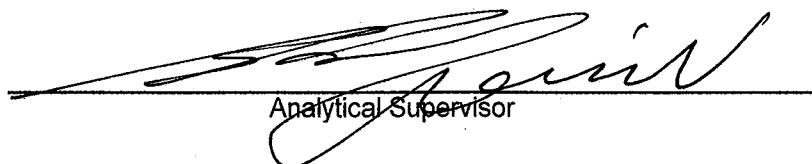
Michael Atchley  
TDEC-WPC  
Knoxville FO  
3711 Middlebrook Pike  
Knoxville, TN 37921

**Lab ID:** K00002140  
Knoxville Regional Laboratory

**Sampling Agency:** TDEC: Division of Water Pollution Control

**Billing Code:** 327.34-20

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.

  
Analytical Supervisor

**Lab-Sample Number:** K00002140001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 01/29/2009 09:45  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 6.98 pH Units  
**Chlorine, residual:**  
**Conductivity:** 49 uMHO  
**Temperature:** 2.89  
**Dissolved Oxygen:** 13.28 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	16	mg/L	3.8	10	P Leathers	2/2/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	25	mg/L	0.7	1	P Leathers	1/30/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.1	ml/L	0.10	0.10	P Leathers	1/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	53	mg/L	10	10	A Peebles	1/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002140002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 01/29/2009 09:50  
**Sampler's Name:** Jonathon Burr  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 6.94 pH Units  
**Chlorine, residual:**  
**Conductivity:** 51 uMHO  
**Temperature:** 2.79  
**Dissolved Oxygen:** 13.24 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	9.9J	mg/L	3.8	10	P Leathers	2/2/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	16	mg/L	0.7	1	P Leathers	1/30/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	<0.1	ml/L	0.10	0.10	P Leathers	1/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	20	mg/L	10	10	A Peebles	1/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002140003  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 01/29/2009 10:00  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 6.94 pH Units  
**Chlorine, residual:**  
**Conductivity:** 49 uMHO  
**Temperature:** 2.75  
**Dissolved Oxygen:** 13.19 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	16	mg/L	3.8	10	P Leathers	2/2/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	29	mg/L	0.7	1	P Leathers	1/30/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.1	ml/L	0.10	0.10	P Leathers	1/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	41	mg/L	10	10	A Peebles	1/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002140004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 01/29/2009 10:10  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 6.93 pH Units  
**Chlorine, residual:**  
**Conductivity:** 53 uMHO  
**Temperature:** 2.85  
**Dissolved Oxygen:** 13.00 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	26	mg/L	3.8	10	P Leathers	2/2/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	32	mg/L	0.7	1	P Leathers	1/30/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	<0.1	ml/L	0.10	0.10	P Leathers	1/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	18	mg/L	10	10	A Peebles	1/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002140005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3 near Hwy 70 bridge  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 01/29/2009 10:25  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.65 pH Units  
**Chlorine, residual:**  
**Conductivity:** 149 uMHO  
**Temperature:** 6.60  
**Dissolved Oxygen:** 11.87 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	91	mg/L	3.8	10	P Leathers	2/2/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	76	mg/L	0.7	1	P Leathers	1/30/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	<0.1	ml/L	0.10	0.10	P Leathers	1/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	13	mg/L	10	10	A Peebles	1/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

<b>Lab-Sample Number:</b>	K00002140006	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.89 pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley F	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA ash spill	<b>Conductivity:</b>	201 uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	7.39
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	11.20 mg/L
<b>Date/Time Collected:</b>	01/29/2009 10:40	<b>Other:</b>	
<b>Sampler's Name:</b>	Larry Everett	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>	02/09/2009		
<b>Date/Time Received:</b>	01/29/2009 13:30		
<b>Received By:</b>	Ken Hitchman		

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	P Leathers	2/2/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	85	mg/L	0.7	1	P Leathers	1/30/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	<0.1	ml/L	0.10	0.10	P Leathers	1/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	1/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**



**STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL  
Lab Services - Jackson Regional Lab  
Jackson, TN 38301  
731-426-0686

TDH: Lab Services KRL  
Lab Services - Knoxville Regional Lab  
Knoxville, TN 37920  
865-549-5201

TDH: Lab Services NCL  
Lab Services - Nashville Central Lab  
Nashville, TN 37243  
615-262-6300

**Sent To:** Greg Denton  
TDEC-WPC  
6th Floor, L & C Tower Annex  
401 Church Street  
Nashville, TN 37243-1534

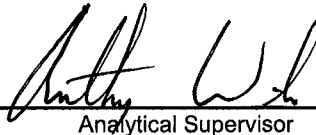
Michael Atchley  
TDEC-WPC  
Knoxville FO  
3711 Middlebrook Pike  
Knoxville, TN 37921

**Lab ID:** K00002140  
Knoxville Regional Laboratory

**Sampling Agency:** TDEC: Division of Water Pollution Control

**Billing Code:** 327.34-20

This is to certify that the following results were determined using  
good laboratory practices and in accordance with federal or state  
approved methodologies.

  
Analytical Supervisor



**Lab-Sample Number:** K00002140001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 01/29/2009 09:45  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 6.98 pH Units  
**Chlorine, residual:**  
**Conductivity:** 49 uMHO  
**Temperature:** 2.89  
**Dissolved Oxygen:** 13.28 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	01/30/2009				A Bass	1/30/2009

TEST: ICP			METHOD: EPA 200.7			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	1400	µg/L	2.9	10	A Bass	2/2/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	970	µg/L	64.0	100	M Pattanayek	2/3/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	2/2/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	2/2/2009
Barium	36	µg/L	2.5	5	M Pattanayek	2/2/2009
Beryllium	0.14J	µg/L	0.11	1	M Pattanayek	2/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/2/2009
Chromium	2.7J	µg/L	2.0	5	M Pattanayek	2/2/2009
Cobalt	1.3	µg/L	0.04	1	M Pattanayek	2/2/2009
Copper	3.1	µg/L	0.38	1	M Pattanayek	2/2/2009
Lead	1.7	µg/L	0.10	1	M Pattanayek	2/2/2009
Manganese	97	µg/L	0.42	1	M Pattanayek	2/2/2009
Nickel	2.8	µg/L	0.25	1	M Pattanayek	2/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	2/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	2/2/2009
Thallium	0.08J	µg/L	0.03	1	M Pattanayek	2/2/2009
Vanadium	10	µg/L	3.4	5	M Pattanayek	2/2/2009
Zinc	7.9	µg/L	1.9	5	M Pattanayek	2/2/2009

**Lab-Sample Number:** K00002140001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 01/29/2009 09:45  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 6.98 pH Units  
**Chlorine, residual:**  
**Conductivity:** 49 uMHO  
**Temperature:** 2.89  
**Dissolved Oxygen:** 13.28 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	2/2/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002140002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 01/29/2009 09:50  
**Sampler's Name:** Jonathon Burr  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 6.94 pH Units  
**Chlorine, residual:**  
**Conductivity:** 51 uMHO  
**Temperature:** 2.79  
**Dissolved Oxygen:** 13.24 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	01/30/2009				A Bass	1/30/2009

TEST: ICP			METHOD: EPA 200.7			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	1100	µg/L	2.9	10	A Bass	2/2/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	520	µg/L	64.0	100	M Pattanayek	2/3/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	2/2/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	2/2/2009
Barium	29	µg/L	2.5	5	M Pattanayek	2/2/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/2/2009
Chromium	2.7J	µg/L	2.0	5	M Pattanayek	2/2/2009
Cobalt	0.56J	µg/L	0.04	1	M Pattanayek	2/2/2009
Copper	1.2	µg/L	0.38	1	M Pattanayek	2/2/2009
Lead	0.66J	µg/L	0.10	1	M Pattanayek	2/2/2009
Manganese	36	µg/L	0.42	1	M Pattanayek	2/2/2009
Nickel	1.8	µg/L	0.25	1	M Pattanayek	2/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	2/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	2/2/2009
Thallium	0.05J	µg/L	0.03	1	M Pattanayek	2/2/2009
Vanadium	10	µg/L	3.4	5	M Pattanayek	2/2/2009
Zinc	10	µg/L	1.9	5	M Pattanayek	2/2/2009

**Lab-Sample Number:** K00002140002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 01/29/2009 09:50  
**Sampler's Name:** Jonathon Burr  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 6.94 pH Units  
**Chlorine, residual:**  
**Conductivity:** 51 uMHO  
**Temperature:** 2.79  
**Dissolved Oxygen:** 13.24 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	2/2/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002140003  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 01/29/2009 10:00  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 6.94 pH Units  
**Chlorine, residual:**  
**Conductivity:** 49 uMHO  
**Temperature:** 2.75  
**Dissolved Oxygen:** 13.19 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	01/30/2009				A Bass	1/30/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	890	µg/L	2.9	10	A Bass	2/2/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	590	µg/L	64.0	100	M Pattanayek	2/3/2009
Antimony	2.0	µg/L	0.33	1	M Pattanayek	2/2/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	2/2/2009
Barium	30	µg/L	2.5	5	M Pattanayek	2/2/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/2/2009
Chromium	3.2J	µg/L	2.0	5	M Pattanayek	2/2/2009
Cobalt	0.90J	µg/L	0.04	1	M Pattanayek	2/2/2009
Copper	2.4	µg/L	0.38	1	M Pattanayek	2/2/2009
Lead	1.1	µg/L	0.10	1	M Pattanayek	2/2/2009
Manganese	93	µg/L	0.42	1	M Pattanayek	2/2/2009
Nickel	2.1	µg/L	0.25	1	M Pattanayek	2/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	2/2/2009
Silver	0.04J	µg/L	0.03	0.25	M Pattanayek	2/2/2009
Thallium	0.20J	µg/L	0.03	1	M Pattanayek	2/2/2009
Vanadium	9.5	µg/L	3.4	5	M Pattanayek	2/2/2009
Zinc	9.0	µg/L	1.9	5	M Pattanayek	2/2/2009

**Lab-Sample Number:** K00002140003  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 01/29/2009 10:00  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 6.94 pH Units  
**Chlorine, residual:**  
**Conductivity:** 49 uMHO  
**Temperature:** 2.75  
**Dissolved Oxygen:** 13.19 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	2/2/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002140004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 01/29/2009 10:10  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 6.93 pH Units  
**Chlorine, residual:**  
**Conductivity:** 53 uMHO  
**Temperature:** 2.85  
**Dissolved Oxygen:** 13.00 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	01/30/2009				A Bass	1/30/2009

TEST: ICP			METHOD: EPA 200.7			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	700	µg/L	2.9	10	A Bass	2/2/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	420	µg/L	32.0	50	M Pattanayek	2/3/2009
Antimony	0.40J	µg/L	0.33	1	M Pattanayek	2/2/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	2/2/2009
Barium	30	µg/L	2.5	5	M Pattanayek	2/2/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/2/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	2/2/2009
Cobalt	0.63J	µg/L	0.04	1	M Pattanayek	2/2/2009
Copper	1.6	µg/L	0.38	1	M Pattanayek	2/2/2009
Lead	0.76J	µg/L	0.10	1	M Pattanayek	2/2/2009
Manganese	98	µg/L	0.42	1	M Pattanayek	2/2/2009
Nickel	1.6	µg/L	0.25	1	M Pattanayek	2/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	2/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	2/2/2009
Thallium	0.08J	µg/L	0.03	1	M Pattanayek	2/2/2009
Vanadium	7.0	µg/L	3.4	5	M Pattanayek	2/2/2009
Zinc	6.1	µg/L	1.9	5	M Pattanayek	2/2/2009

**Lab-Sample Number:** K00002140004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 01/29/2009 10:10  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 6.93 pH Units  
**Chlorine, residual:**  
**Conductivity:** 53 uMHO  
**Temperature:** 2.85  
**Dissolved Oxygen:** 13.00 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	2/2/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected



**Lab-Sample Number:** K00002140005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3 near Hwy 70 bridge  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 01/29/2009 10:25  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**

**pH:** 7.65 pH Units  
**Chlorine, residual:**  
**Conductivity:** 149 uMHO  
**Temperature:** 6.60  
**Dissolved Oxygen:** 11.87 mg/L  
**Other:**  
**Flow:** CFS

**TEST: Digestion Metals**
**METHOD: EPA 200.2**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	01/30/2009				A Bass	1/30/2009

**TEST: ICP**
**METHOD: EPA 200.7**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	490	µg/L	2.9	10	A Bass	2/2/2009

**TEST: ICP-MS**
**METHOD: EPA 200.8**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	390	µg/L	32.0	50	M Pattanayek	2/3/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	2/2/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	2/2/2009
Barium	35	µg/L	2.5	5	M Pattanayek	2/2/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/2/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	2/2/2009
Cobalt	0.43J	µg/L	0.04	1	M Pattanayek	2/2/2009
Copper	2.0	µg/L	0.38	1	M Pattanayek	2/2/2009
Lead	0.62J	µg/L	0.10	1	M Pattanayek	2/2/2009
Manganese	53	µg/L	0.42	1	M Pattanayek	2/2/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	2/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	2/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	2/2/2009
Thallium	0.07J	µg/L	0.03	1	M Pattanayek	2/2/2009
Vanadium	5.1	µg/L	3.4	5	M Pattanayek	2/2/2009
Zinc	3.4J	µg/L	1.9	5	M Pattanayek	2/2/2009

**Lab-Sample Number:** K00002140005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3 near Hwy 70 bridge  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 01/29/2009 10:25  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 02/09/2009  
**Date/Time Received:** 01/29/2009 13:30  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.65 pH Units  
**Chlorine, residual:**  
**Conductivity:** 149 uMHO  
**Temperature:** 6.60  
**Dissolved Oxygen:** 11.87 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	2/2/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

<b>Lab-Sample Number:</b>	K00002140006	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.89      pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley Road	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA ash spill	<b>Conductivity:</b>	201      uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	7.39
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	11.20      mg/L
<b>Date/Time Collected:</b>	01/29/2009      10:40	<b>Other:</b>	
<b>Sampler's Name:</b>	Larry Everett	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>	02/09/2009		
<b>Date/Time Received:</b>	01/29/2009      13:30		
<b>Received By:</b>	Ken Hitchman		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	01/30/2009				A Bass	1/30/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	360	µg/L	2.9	10	A Bass	2/2/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	180	µg/L	6.4	10	M Pattanayek	2/3/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	2/2/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	2/2/2009
Barium	33	µg/L	2.5	5	M Pattanayek	2/2/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/2/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	2/2/2009
Cobalt	0.25J	µg/L	0.04	1	M Pattanayek	2/2/2009
Copper	1.4	µg/L	0.38	1	M Pattanayek	2/2/2009
Lead	0.39J	µg/L	0.10	1	M Pattanayek	2/2/2009
Manganese	41	µg/L	0.42	1	M Pattanayek	2/2/2009
Nickel	1.2	µg/L	0.25	1	M Pattanayek	2/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	2/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	2/2/2009
Thallium	0.05J	µg/L	0.03	1	M Pattanayek	2/2/2009
Vanadium	6.0	µg/L	3.4	5	M Pattanayek	2/2/2009
Zinc	7.8	µg/L	1.9	5	M Pattanayek	2/2/2009

<b>Lab-Sample Number:</b>	K00002140006	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.89      pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley Road	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA ash spill	<b>Conductivity:</b>	201      uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	7.39
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	11.20      mg/L
<b>Date/Time Collected:</b>	01/29/2009      10:40	<b>Other:</b>	
<b>Sampler's Name:</b>	Larry Everett	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>	02/09/2009		
<b>Date/Time Received:</b>	01/29/2009      13:30		
<b>Received By:</b>	Ken Hitchman		

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	2/2/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected